

1.933  
N95

To cat

1.933  
N95  
DEC 20 1941

REA DEFENSE FOOD SERIES

NUTRITION CENTERS

How to Plan and Equip Them



"Food is fundamental to the defense of the United States . . . On a foundation of good food we can build anything. Without it we can build nothing . . . We want to make sure that everyone in the United States has in his diet enough energy, enough bone, blood and muscle-building food, enough vitamins, to give that feeling of 'health plus' . . . We want to make sure that our millions are so fed that their teeth are good, their digestive systems healthy, their resistance to premature old age enhanced through strong bodies and alert minds."

Henry A. Wallace  
Vice President of the U. S. A.

RURAL ELECTRIFICATION ADMINISTRATION  
UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D. C.





UNITED STATES DEPARTMENT OF AGRICULTURE  
RURAL ELECTRIFICATION ADMINISTRATION  
WASHINGTON

August 11, 1941

TO BOARDS AND MANAGERS OF REA-FINANCED SYSTEMS:

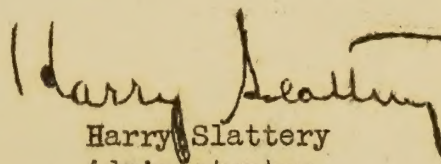
You have a definite responsibility in our national Food for Defense program. This leaflet tells in simple language the Why, How, When and Where of it.

The leaflet answers questions about the National Nutrition Program, what it means to REA co-ops, how they can assist in getting community food-processing centers established which can be useful in the school-lunch program, as demonstration centers for farm people, and as an aid to low-income farm families in raising their living standards.

The leaflet also indicates to other interested groups and persons in what ways the rural-electrification program can contribute to the Food for Defense efforts. REA welcomes their cooperation with REA-financed systems in these efforts.

Think about the quotation on the cover of this leaflet! The task which Vice President Wallace has set for us must be tackled here and now. Delay may fatally weaken the strength of our Nation. I am banking on your wholehearted support and immediate action in making the plan here outlined effective.

Sincerely,

  
Harry Slattery  
Administrator





## TABLE OF CONTENTS

	Page
The National Nutrition Program. . . . .	1
Interested Agencies . . . . .	2
How Electricity Can Help . . . . .	3
 A Challenge to REA-financed Systems . . . . .	4
Purpose of Nutrition Centers . . . . .	4
Who Will Cooperate . . . . .	5
 Equipment for Food-processing Centers . . . . .	7
Flour Mills . . . . .	7
Refrigerating Equipment . . . . .	8
Cooking and Baking Equipment . . . . .	8
Dehydrating Equipment . . . . .	9
 Financing Procedure . . . . .	11
 How to Get Food-processing Centers Set Up . . . . .	13





## THE NATIONAL NUTRITION PROGRAM

The National Nutrition Conference for Defense, meeting last May in Washington at the President's request, made the Nation aware of a very serious problem. American nutrition experts were unanimous in pointing out that we ourselves do not use enough of the very foods which Great Britain and other friendly countries need to get from us in order to maintain the health of their people.

### Why is this question of food so important?

Because now more than ever we need to build up and maintain the health, strength and energy of our people. An adequate diet instead of an average diet will not only assure "strong bodies and alert minds," but can add 10 years to the active life span of men and women.

### What do we need for a satisfactory diet?

If everyone in the United States is to have a satisfactory diet, says Secretary Wickard, "it has been figured that we would need to consume twice as much green vegetables and fruits as we do now (such things as cabbage, green beans, apples, and so on) -- 70 percent more tomatoes and citrus fruits -- 35 percent more eggs -- 15 percent more butter -- 20 percent more milk. All of these are 'protective foods,' rich in minerals or vitamins, or both." Also, it was brought out at the Nutrition Conference that whole-wheat flour contains a rich supply of several vitamins and minerals essential to good health in which ordinary white flour is almost totally deficient.

### How can we make good nutrition possible for the whole Nation?

By concentrating our efforts on:

1. More widespread production of "protective foods."
2. Better conservation of such foods.
3. Bringing such foods within reach of everyone.
4. Processing and preparing food so that practically all of the vitamin and mineral values are retained in it.

### By what means is that proposed to be done?

The Nutrition Conference agreed on a number of steps, including the following:





"The mobilization of every educational method to spread the newer knowledge of nutrition among laymen by means of schools, motion pictures, the radio, the public press, home and community demonstrations, and all other suitable means.

"Mobilization of all neighborhood, community, State and national organizations and services that can contribute in any way to raising the nutritional level of the people of the United States.

"Full use of any practical devices, such as the so-called stamp plan, free school lunches, and low-cost milk distribution, which will bring nourishing, adequate meals to those who could not otherwise afford them, and at the same time help to distribute food surpluses at a fair return to the farmer.

"Encouragement in all practical ways of greater production by agriculture of the foods needed in more abundance, according to the newer knowledge of nutrition, in the average American diet.

"Equally, encouragement in every practical way of more production for home use by rural people, especially those at low-income levels."

What agencies are interested in the Food for Defense program?

The President has appointed Federal Security Administrator Paul V. McNutt as National Coordinator of Health, Nutrition, Welfare and other related Defense activities, and Dr. M. L. Wilson, Director of Extension, was appointed as Director of Nutrition Defense. Many Federal, State and local agencies and groups are planning and working to make the program effective throughout the Nation.

The Federal agencies most actively interested include:

U. S. Office of Education  
Public Health Service  
Work Projects Administration  
National Youth Administration

and the following agencies of the U. S. Department of Agriculture:

Agricultural Adjustment Administration  
Farm Security Administration  
Bureau of Home Economics  
Extension Service  
Surplus Marketing Administration  
Rural Electrification Administration  
As well as the bureaus concerned with  
specific phases of farm management





What place has rural electrification in this program?

The farmers carry the burden of food production, both for the Nation as a whole and for their own families. Rural electrification enables them to do a better job of it. More specifically, electricity when properly used on the farm makes possible:

1. Increased production, for sale or for home use, of vegetables, poultry, dairy and other farm products.
2. Better preservation of perishable foods through refrigeration, canning or dehydration.
3. Easier preparation of palatable and nourishing meals at a saving of time and energy.
4. Home grinding of flour and meal rich in vitamins and minerals from whole grain and legumes (peanuts, soy beans, etc.).
5. Saving of labor on the farm and in the home, thereby relieving shortage of farm labor.





## A CHALLENGE TO REA-FINANCED SYSTEMS

REA cooperatives are generally aware of their responsibility to assist their members in learning to use electricity for increased production, for saving of time, labor and expense, for conservation and preparation of food, and for better health. The needs of National Defense make this type of educational membership activity more important than ever before.

Fortunately, the National Nutrition Program is stimulating the interest and support of rural educators and farm community leaders everywhere. Practically every rural community served by an REA co-op will soon have its own local "Food for Defense" program that will tie in with the State and national program. If REA co-ops cooperate with these other local groups in every possible way, they can make rural electrification a vital factor in this program.

Is there any special plan REA co-ops can work on?

Yes. They can promote and assist in the establishment of electrical food-processing centers in rural communities which they serve.

Where should electrical food-processing centers be located?

Preferably in or near rural schools. Other practical locations might be in community buildings, in church basements, or even at REA co-op headquarters if space can be provided.'

What is the purpose of these centers?

To provide facilities for rural people where they can learn how to conserve and prepare food so as to get the most out of it.

If located in or near schools, they can be used for the preparation of school lunches. This is particularly important at this time, as the governmental agencies concerned with the school-lunch program are planning this year to help in making hot lunches available for several million more school children than in the past. Rural schools with food-preparation facilities can take advantage of this help.

Such centers can also be made available to families in the rural community for processing some of their own foods, and can be used for processing donated food to be used later in the school-lunch program.





Schools, churches, or other community buildings so equipped will be more serviceable for community gatherings of all sorts and can be used more effectively to feed and house needy groups of people in case of emergency or disaster due to whatever cause.

Who will cooperate in getting such centers established?

REA is ready to loan funds to REA-financed systems, under Section 5 of the REA Act, for the financing of approved installations, at very reasonable terms, in buildings receiving electric service from such systems. A number of suppliers of electrical equipment are offering special educational discounts on equipment to be installed in schools and other educational centers.

Locally, the success of the plan will depend, of course, on the interest shown by the school authorities, parent-teacher associations, school-lunch sponsors, nutrition councils, women's clubs, church and other civic groups, and farm organizations.

Assistance in popularizing the idea, in planning the center and in putting it to effective use, can also generally be obtained from county and home agents, Farm Security supervisors, vocational instructors, local WPA and NYA officials, and agricultural planning committees.

Why should REA co-ops promote this plan?

Because:

1. They are now serving more than 10,000 rural schools, in addition to thousands of churches and many community buildings. When present construction is completed, they will be serving about 15,000 schools.
2. Consumers on REA-financed lines now total about 3,000,000 men, women, and children. These rural people make up the communities that will benefit directly and indirectly from the establishment of such centers.
3. The success of REA co-ops as community enterprises depends on making electricity of the greatest possible use to farm families. The educational activities that can be promoted through such a center will help much to accomplish this.
4. It is the privilege and duty of every citizen and of every group of citizens to help in every way in building a strong Nation and conserving our national resources as part of our national-defense efforts. The establishment and effective use of these food-processing centers will contribute directly to the "Food for Defense" program.





What are the details of the plan?

They are outlined in the following pages, which deal with kinds and types of equipment suitable for various installations, financing procedure, and suggestions on how to get such centers set up.





## EQUIPMENT FOR FOOD-PROCESSING CENTERS

The type and size of electrical equipment feasible for a particular center depends on various factors. In the case of a school center, for example, it depends on the number of pupils for whom lunches are to be prepared, on the amount and location of available space, and on what financial obligation can safely be assumed in equipping the center. In so far as possible, every center should provide equipment for:

1. Grinding of whole-wheat flour and other whole-grain products.
2. Refrigeration of perishable food.
3. Cooking, baking and canning.
4. Dehydrating of certain vegetables and fruits.

### A. Types of Equipment.

Below is a brief description of various types of equipment in different price ranges. The prices referred to are list prices. Where educational or other discounts can be obtained, the total cost of setting up a suitable center will be correspondingly less. In so far as possible, REA systems are urged to contribute installation labor and materials free of charge, as a service to the community and a contribution to the defense program.

#### 1. Flour Mills

REA has made a study of suitable mills at different price levels. The study included steel burr mills, stone burr mills and hammer mills. It was found that all three types are capable of producing a satisfactory, general-purpose whole-wheat flour. The larger and more expensive mills will, by and large, grind faster and be capable of a wider range of fineness. Some of the hammer mills are primarily feed grinders and can thus serve a dual purpose. The study shows:

a. Lowest-priced mills. There are at least two small steel burr mills on the market that can be rigged up, complete with a fractional-horsepower motor, at a total cost of about \$20. They are suitable for one-teacher schools and for home milling.

b. Medium-priced mills. There are several makes of satisfactory burr and hammer mills available (complete with motors) within a price range from \$60 to \$135.

c. Higher-priced mills. Ranging from \$150 on up, there



are excellent steel or stone burr and hammer mills available, some with extra refinements, such as a blower for cleaning the grain or an automatic feeding device of extra-wide range.

## 2. Refrigerating Equipment.

Refrigeration is needed not only to store a perishable food until needed and to keep surplus food from spoiling, but also to make certain foods, such as milk, more palatable. Even a very small center should therefore provide some electric refrigeration if at all possible. There is a wide range of choice.

a. Lowest-priced equipment. No refrigerator of less than 6 cubic feet capacity is considered practical for any center. List prices of current 6-foot models range from about \$90 on up. If such a model, without accessories, is still out of reach even with an educational discount, it may be possible to obtain an older model, either new or used, at a price which the sponsors of the center can justify.

b. Medium-priced equipment. Modern 6- and 8-foot refrigerators, stripped of unessential accessories, are listed at prices ranging from \$120 to \$185. In this range it is possible to obtain models with special features, such as quick-freezing units, extra-large freezing units, and space for large milk containers.

c. Higher-priced equipment. If more storage space is desired, a household or commercial-type refrigerator with from 9-to 12-cubic-foot capacity may suffice. In a larger center, where sufficient space is available, a walk-in type refrigerator with a zero compartment for freezing foods and for frozen-food storage may prove the most practical. Depending on capacity and construction, list prices range from \$200 on up for 9-foot models and from about \$400 on up for walk-in types. It is possible to build the cabinet of a walk-in refrigerator locally, with a corresponding saving in total cost.

## 3. Cooking and Baking Equipment.

The measured, controlled heat of electricity greatly simplifies the preparation of meals, whether in the school or in the home. The absence of flame eliminates fire hazard to a great extent. There is a wide selection of such equipment, suited to varying needs.

a. Lowest-priced equipment. The minimum recommended for a one-teacher school is a double-unit hotplate, equipped with open or enclosed units and three-heat switches. This can be had in a price range from \$8.50 to \$17.00.

A desirable addition would be a 16- or 18-quart electric roaster. Stripped of utensil set and broiler, such a roaster,





retailing at around \$20, is handy for one-dish meals, for baking and other uses.

b. Medium-priced equipment. An electric range, with 3 or 4 surface units and an average-size oven, has many advantages over the combination listed above, including superior baking ability and greater convenience in cooking and canning. Good electric ranges list from \$90 on up.

c. Higher-priced equipment. Where conditions warrant, a larger range with special features, such as automatic time control, will be well worth a somewhat higher investment. If still more capacity is needed, such a range may be supplemented with one or more hotplates and roasters.

If the center has a pressure water system, an electric water heater will be a great help. Automatic storage heaters are priced from \$65 on up, depending on storage capacity.

#### 4. Dehydrating Equipment.

Drying is the oldest method of food preservation. It was used widely by thrifty farm householders until pickling, preserving, canning and, more recently, quick freezing took its place. Since the first world war it has gradually come back into greater use because of the obvious advantages of dried foods as far as ease and cheapness of storage are concerned. The basic idea of modern dehydration methods is to extract practically all of the water from the fresh fruit or vegetables by the application of controlled heat combined with a constant change of the surrounding air as it gets saturated with moisture.

Electrical dehydrating equipment now on the market is largely of the commercial type and generally too expensive for the kind of center here considered. However, several agricultural colleges are now experimenting with simpler and smaller units, and REA is now perfecting a basic unit which can readily be assembled in the farm or school workshop.

Indications are that satisfactory dehydrators, including heating unit and fan, can be built from \$10 on up. As soon as more definite information is available, it will be passed on to REA systems.

#### B. Centers at Three Cost Levels.

Below are suggestions for installations at different cost levels, suited respectively to one-room, medium-sized and larger schools. In the case of churches or other community buildings, suitable variations will suggest themselves.





It must be remembered that the total cost of the center will very likely be more than just the cost of the electrical equipment. There will be need of cupboards, tables, benches, cooking utensils, dishes, etc., which will have to be purchased unless they are donated. A suitable cabinet and work-table combination for use in small centers was recently designed by WPA in consultation with REA home-electrification specialists. It can be fitted into a cloak room, a basement or even a class room, as it was designed for compactness and step-saving. Drawings of this cabinet may be obtained by writing to the Work Projects Administration, 1734 New York Avenue, Washington, D. C.

1. Low-cost Installation.

- a. One hotplate of the two-unit type.
- b. One roaster of 16- or 18-quart capacity, stripped of dish set and broiler.
- c. One small, steel burr flour mill.
- d. One small dehydrator.

2. Medium-cost Installation.

- a. One range -- low-cost model, stripped of all extra features. This can be supplemented with hotplate and roaster in case of need.
- b. One refrigerator of 6 or 8 cubic feet capacity, standard model, stripped of extra features.
- c. One small, steel burr flour mill.
- d. One dehydrator.
- e. Water-pressure system, if not already available.

3. Large-capacity Installation.

- a. One large range, to be supplemented with roasters and hotplates as needed.
- b. One 12-foot refrigerator or, if feasible, a walk-in refrigerator equipped with zero compartment.
- c. One flour mill of commercial grinding capacity.
- d. One larger dehydrator.
- e. Water-pressure system if not already available.
- f. One water heater of 30- to 80-gallon capacity.



## FINANCING PROCEDURE

In so far as loan funds under Section 5 of the REA Act are available, REA-financed systems are authorized to finance the purchase and installation of approved electrical equipment for community food-processing centers to be served by them with electricity.

### What are the terms of such financing?

A down payment of at least 5 percent of the total purchase price, balance to be paid over a period of not to exceed five years, in monthly, quarterly or semi-annual payments, interest to be paid at the rate of 6 percent per annum on the unpaid balances. On certain household appliances the down payment must be larger and the payment period shorter, in accordance with the current regulations of the Federal Reserve System.

### How can such financing be obtained?

1. The REA-financed system desiring to finance equipment purchases by consumers on its lines must make sure that it will have sufficient funds available for that purpose. This can be done by estimating the total amount of such financing the system will have to provide, and by forwarding to the Applications and Loans Division of REA a board resolution requesting the allotment of that amount as an S.5 loan. When the system has received word that this sum has been earmarked, it can proceed to consider application for such financing.

2. Applications for financing must be made to the system directly by the prospective purchaser, in this case the school board or whatever other responsible body or group is willing and able to assume the obligation of paying off the desired loan.

3. If desired, the system management will be glad to give advice and assistance in the selection and purchasing of suitable equipment.

4. Any application approved by the board and its credit committee must also be approved by REA as to quality and price of the equipment to be purchased, before the purchase is completed.

5. Upon delivery and installation of the equipment, the purchaser and the seller must fill out the standard REA form of Conditional Sale Contract which the seller, in turn, must assign to the REA system in order to receive payment in full on the items sold.





To whom does the purchaser make his payments?

To the REA-financed system, since it has taken over the contract from the seller.

Who takes care of repair or servicing of equipment?

That depends on the written agreement. In any case, it will be the responsibility of the REA system holding the sale contract to make sure that any needed repairs and servicing are provided in accordance with the guaranty.





### HOW TO GET FOOD-PROCESSING CENTERS SET UP

The job can be done only through local initiative and co-operation. Unless some other organized group takes the lead, it is suggested that the REA co-op provide the initiative. Local conditions will, of course, determine the best approach to getting the job done. Where no better plan suggests itself, the following steps are recommended to REA systems:

1. The system superintendent, with the help of the board and the electrification adviser or chief lineman, will select a key man or woman from each school community having REA service. This group will be the REA Co-op Committee for Equipping Nutrition Centers.

2. The system superintendent will call this committee together and acquaint it with the Food for Defense program and with the plan here outlined for setting up food-processing centers.

3. The system superintendent or someone delegated by him should call on each county school superintendent to determine the extent and current plans of the school-lunch program as it affects schools on REA lines. He or she should discuss with the school superintendent the plan for equipping or expanding food-processing centers and secure his cooperation. Obtain from him the names of key persons in the county who are concerned with the school-lunch program or with other phases of the Nutrition for Defense program.

4. Next, the system superintendent should call in each county a county-wide meeting of these key people with the REA Co-op Committee for a discussion of the plan. This meeting will very likely include:

- (1) County School Superintendent
- (2) Chairman of County Nutrition Council
- (3) WPA County Supervisor and County Lunch-Room Supervisor
- (4) NYA County Supervisor
- (5) County F.S.A. Supervisors
- (6) County Farm and Home Agents
- (7) Principals of REA-served schools of more than 2 rooms
- (8) Agriculture and Home Economics Teachers of REA-served schools
- (9) President of County P.T.A.
- (10) County Health Officer and County Nurse
- (11) Chairman of County Agricultural Planning Committee
- (12) Chairman of County Agricultural Defense Board



The matters to be taken up at this meeting should include:

- a. Presentation of plan for equipping schools or community buildings on REA lines with electrical equipment for food processing. Explanation of feasible types of equipment and the uses of such equipment in the school-lunch program and for other purposes as indicated on page 4 of this leaflet.
  - b. Demonstration of various types of equipment, if possible.
  - c. Explanation of what help the REA Co-op can give in selection, financing and installation of equipment.
  - d. General discussion of plan and how agencies can co-operate in making it effective.
  - e. If possible, select at this meeting from the schools served by the co-op, to begin with, the two or three which most need such a center and are most likely to get adequate community support for it. If there are both one-room and larger schools on the REA lines in the county, it is best to select a one-room school, a 2- or 3-teacher school, and a larger consolidated school so as to cover all types by way of example.
5. Have the REA co-op board arrange with REA for sufficient S.5 funds to take care of expected financing requirements.
6. Each local REA co-op committee member, in whose community one of the selected schools is located, will explain the plan to key persons in the community, such as school board, school principal, P.T.A. and other community organizations. With the help of these key people and of the REA co-op office, the details of planning the local center, selecting, financing and installing the equipment can be worked out. If the local school board cannot assume the financial responsibility for the purchase of the equipment, the community will generally have enough initiative and ingenuity to find the means of securing the equipment.
7. Each center needs to be carefully planned, both as to feasible equipment and suitable placement of equipment. Suggestions for well-planned centers can usually be secured from county or state departments of education.
8. As soon as the initially selected centers are completed, they can serve as patterns for the development of such centers in other school communities.





REA will forward to the REA co-ops, from time to time, additional information and suggestions helpful in making this plan effective. The REA co-op committees are urged to use that material. If any special problems should arise, REA will be glad to give all possible assistance.























"A great deal can be accomplished for the farm and village population by extending home production, home and community canning, and community refrigeration.....  
...Why farm people should go without adequate diets when they can raise food just a few steps from their own back door is more than I can see. We can go a long way with a good home production program."

Claude R. Wickard  
Secretary of Agriculture